DIRECT TESTIMONY OF

DANIEL F. KASSIS, P.E.

ON BEHALF OF

DOMINION ENERGY SOUTH CAROLINA, INC.

DOCKET NO. 2019-365-E

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Daniel ("Danny") F. Kassis. My business address is 2392 West Aviation Avenue, North Charleston, South Carolina 29406. I am the General Manager of Strategic Partnerships & Renewable Energy, for Dominion Energy South Carolina, Inc. ("DESC"). My responsibilities include developing DESC's strategy for deploying and utilizing renewable assets consistent with state policy in the most efficient and beneficial manner to DESC's customers. I oversee customer facing solar and all renewable energy initiatives for DESC and am also responsible for negotiating and approving renewable energy contracts for DESC. I have the approval authority for DESC and have signed all contracts for DESC under the Distributed Energy Resources Act, as well as numerous renewable resource power purchase agreements.

Q. BRIEFLY STATE YOUR EDUCATION, BACKGROUND, AND EXPERIENCE.

A. In 1984, while still a student, I began working for DESC, then South Carolina Electric & Gas Company ("SCE&G"), as an Engineering Student Assistant.[1] In 1986, I received a Bachelor of Science degree in Mechanical Engineering from Clemson University, and I am licensed in South Carolina as a Professional Engineer. Upon graduation, I began working at the Charleston Naval Shipyard in the navy's nuclear submarine program. In 1987, I rejoined SCE&G and served in various roles in the Gas Department, eventually becoming the Manager of the Charleston Division. In 1998, I was named as the District Manager for the Electric Department in the Charleston District. In 2004, I was promoted to the position of General Manager of Electric Service Coordination. In this position, I coordinated all of the areas that supported the retail electric operations for SCE&G. In 2013, I was promoted to the position of Vice President of Customer Service, and I became the Vice President of Customer Relations and Renewables in 2014 with the addition of renewable energy programs and energy efficiency programs under my responsibility. Finally, just earlier this year, my title changed to General Manager of Strategic Partnerships and Renewable Energy.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA (THE "COMMISSION")?

[1] In April of 2019, SCE&G changed its name to DESC.

A. Yes, I previously appeared before the Commission and testified in Docket No. 2019-184-E—DESC's avoided cost docket—and I also provided written testimony regarding DESC's storage tariff in Docket No. 2019-393-E.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my direct testimony is to (i) provide the Commission with a background of DESC's commitment to renewable energy and its success in increasing the amount of renewable energy in its portfolio to date, (ii) introduce the other witnesses testifying on behalf of DESC in this proceeding, and (iii) assist the Commission in its consideration of competitive procurement of renewable energy or "CPRE" programs in this generic docket by providing the Commission with a high-level overview of the complexities and utility-specific nuances inherent to any CPRE process.

BACKGROUND

Q. PLEASE PROVIDE AN OVERVIEW OF DESC'S COMMITMENT TO RENEWABLE ENERGY.

A. DESC has a solid track record with regard to renewable generation. For example, DESC's parent company, Dominion Energy, Inc., announced last year that it intends to achieve net-zero emissions by 2050—one of the boldest commitments yet in the energy sector. Likewise, DESC has received numerous awards

recognizing its specific commitment to renewable energy. Today, DESC has 991.2 MW of solar photovoltaic generation systems comprised of residential, commercial, utility scale and community solar. DESC has an additional 794 MW of environmentally-friendly hydro-generating stations including 576 MW of pumped storage. Finally, the Dominion Energy Innovation Center houses the Duke Energy eGRID, an electrical grid simulator, and the world's most-advanced wind-turbine drivetrain testing facility. The two labs allow for important research to develop solutions to the challenges resulting from the additional adoption of variable energy resources and to approximate the level of response required to mitigate the impact of renewables to the electrical system.

There is also a significant amount of utility-scale (i.e., non-rooftop) solar on the DESC system. For example, in the summer of 2019, the nameplate capacity of utility-scale solar generation on the DESC system was approximately 485 MW. For the summer of 2020, the nameplate capacity of utility-scale solar generation on the DESC system exceeded 849 MW—an approximately 75% increase year-over-year—with utility-scale solar generation capacity expected to exceed 1,000 MW in the near future. In total, there are approximately 4,215 MW of additional application for solar projects pending in DESC's state and federal queue. DESC's highest recorded daytime system load was 4,970 MW on February 20, 2015, while DESC's average daily peak load is less than 3,300 MW. To put this into perspective, DESC recently ranked first in the state for the amount of distributed solar on its system.

Finally, DESC ranks second—among the 13 largest utilities in the Southeast—with 807 solar watts per customer, which is 2.5 times the average for the region.

Q. HOW HAS PURPA CONTRIBUTED TO THE AMOUNT OF RENEWABLE ENERGY ON THE DESC SYSTEM?

A. PURPA has been the primary driver of renewable generation on the DESC system. As a regulated utility, PURPA requires DESC to purchase power from renewable generators designated as Qualifying Facilities (each, a "QF") under PURPA. Although PURPA applies to a range of renewable energy fuel sources, DESC has experienced high saturation levels of a single fuel source—QF solar. Part of this is driven by the fact that technology costs have declined, resulting in increased affordability for project developers, which has led to an increased number of PURPA interconnection requests in the past few years. This resulted in nearly a 75% increase in utility-scale generation on the DESC system from the summer of 2019 to the summer of 2020. However, purchasing generation via PURPA can be cumbersome and not always most cost-effective way to meet resource requirements or achieve policy objectives given that DESC is required to purchase such power without regard for need, location, or impact on reliability. DESC must also provide distribution and transmission service at no charge to the QF. Finally, with PURPA there is no magic cut-off. The PURPA put option remains in place regardless of how much renewable generation the utility adds. The protection for our consumers

if for avoided costs to decrease as units of generation, particularly those with same fuel source increase.

Q. PLEASE EXPLAIN HOW CPRE RELATES TO PURPA.

A. There are several ways these concepts may work together but ultimately it depends on each utility's unique situation. Utilities and policy makers have implemented CPRE programs to accelerate and more cost-effectively advance policy objectives such as the adoption of renewable generation or a particular fuel source such as wind or biomass. For example, these CPRE programs could focus on a more targeted subset of renewable generation or seek to procure such renewable generation at rates that benefit customers and could even be lower than what a utility would otherwise pay under PURPA. More advanced systems—like DESC's—that have adopted a significant level of renewable generation, whether through PURPA, self-build or otherwise, may utilize the CPRE process to strategically address more discrete needs or as a means of deploying emerging technologies. These more advanced systems would not use the CPRE process to simply bolster PURPA and further add utility-scale generation of the same fuel source—particularly where such fuel source already comprises a significant percentage of the overall generation portfolio. In fact, intermittent solar has reached a penetration level such that DESC has been required to implement its curtailment protocols.

Q. PLEASE INTRODUCE THE OTHER WITNESSES TESTIFYING ON BEHALF OF DESC.

A. DESC engaged Guidehouse—a third-party consulting firm—to inform the Commission on a full range of CPRE topics, including best-practices and key factors to consider when tailoring a CPRE process to a given jurisdiction. Guidehouse is a global professional services firm that has a wealth of expertise in performing complex, technical analyses for utilities, utility commissions, and energy providers across multiple jurisdictions. DESC has utilized Guidehouse on a number of matters related to Act 62 and, as a result, Guidehouse has gained a unique understanding of DESC's system operations that is particularly relevant to such a complex topic as CPRE. Guidehouse leveraged DESC's internal subject matter experts and its institutional knowledge to provide the Commission with a meaningful assessment of the items required in this docket. Dean Koujak and Laura Manz from Guidehouse will present testimony on behalf of DESC. DESC Witness Koujak and DESC Witness Manz are Directors with Guidehouse, and each of these witnesses were a critical part of DESC's preparation for this docket. DESC Witness Koujak will draw upon his experience to provide the Commission with a broad overview of the various types of CPRE programs, including an analysis of best practices and certain challenges inherent in implementing a CPRE program. Likewise, DESC Witness Manz will explain how implementation of a CPRE process necessarily impacts a wide range of interconnection issues and provide best practices that have been

utilized to address those impacts. These analyses not only fulfill the Commission's requirements in this docket, but also provide the Commission with a comprehensive overview of the complexities and utility-specific nuances that are implicated within the CPRE process.

COMPETITIVE PROCUREMENT

Q. PLEASE EXPLAIN DESC'S UNDERSTANDING OF THE PURPOSE OF THIS DOCKET.

A. This docket is a generic docket established by the Commission pursuant to Act 62, and it includes various utilities and stakeholders. Specifically, Act 62 authorizes the Commission to undertake a review in this docket of whether a CPRE process would be in the "public interest." Unlike other requirements within Act 62, the General Assembly was clear that the Commission has the discretion to decide whether it should proceed. DESC is pleased to participate in this preliminary discussion, which seeks to frame and define the CPRE process and its various forms. DESC re-iterates its stated belief that the ultimate decision of whether and how to utilize the CPRE process is a utility-specific, need-specific determination that would be made in a utility-specific docket. Consistent with the purpose of this docket, DESC has focused its testimony on broader CPRE concepts and has purposefully avoided providing, to the extent practicable, information specific to DESC and its operations.

Q. WHY IS IT IMPORTANT TO ACCOUNT FOR UTILITY-SPECIFIC NEEDS WHEN CONSIDERING A CPRE PROCESS?

A. Considering the specific needs of a utility prior to implementing a CPRE process is critically important because each utility's unique characteristics, such as generation portfolio, load profile, distribution and transmission systems, among other things, all impact whether and how the utility would utilize the CPRE process. This is echoed by the plain language of Act 62, which references each utility's "balancing authority area"[2] in the context of this docket. For example, a utility's specific needs for additional generation capacity—renewable or otherwise—should be considered and it should be determined what additional capacity, if any, would be in the public interest. If a utility procures capacity beyond what it reasonably requires, it would only create an imbalance that would increase costs to the utility's customers, which would undercut the core of the CPRE process—which is to provide value to the utility's customers without sacrificing reliability.

Likewise, the technology, market conditions, and cost-structures that are specific to each utility should be examined. As I described above, DESC is focused upon integrating emerging technologies into its system as part of its commitment to renewable energy. Other utilities may have similar, utility-specific goals as well. A CPRE process must necessarily account for those existing commitments to ensure

[2] S.C. Code Ann. § 58-41-20(E)(2).

that a CPRE process does not necessarily lock-in a utility to a specific resource or technology to the detriment of those other pre-existing renewable energy goals.

Q. DO YOU AGREE WITH THE COMMISSION'S ASSESSMENT THAT "COMPETITIVE PROCUREMENT OVERLAPS SEVERAL KEY SUBJECT AREAS THAT INVOLVE A GREAT DEAL OF COMPLEXITY?"[3]

A. I certainly agree, and I think that this generic docket will be a critical tool for this Commission to undertake a review of the broad spectrum of options, the inter-relationship between these complex processes, and the time and financial commitment that would be involved in such processes. As DESC Witness Koujak explains, although there are two primary structures for CPRE programs (all-source and single-source), there are a number of variations within each type. For example, the role of independent oversight, the specific parameters of the RFP, and the timing of the CPRE process are just a few of the considerations that can vary across each CPRE program. Each of these possible options involves questions specific to the utility's particular attributes, including capacity needs, integration of emerging technologies, and interconnection standards.

[3] Order No. 2019-876, issued in Docket No. 2019-365-E on December 18, 2019.

Q. YOU MENTIONED PREVIOUSLY THAT OUTSIDE OF THE CPRE PROCESS, UTILITIES PURCHASE ENERGY UNDER PURPA AT AVOIDED COST. COULD UTILITIES PURCHASE ENERGY BELOW AVOIDED COSTS IN A CPRE PROCESS?

A. Theoretically, yes, and it would seem that this would be the only economic scenario in some cases. For example, simply adding more and more renewable energy to a utility's system does not necessarily mean that ratepayers see a corresponding benefit. In fact, at some point, a system can become so saturated that each additional unit of energy procured provides less benefit to the system than the previous unit of energy. This is particularly true where there is a single, intermittent fuel source that dominates the renewable portfolio. If avoided cost rates are steady and not responding to the incremental generation, then this would necessarily mean that the utility is paying more for that energy than what it is worth to the utility. Under a CPRE process, utilities could obtain a price below avoided cost that actually reflects that renewable energy's decreased value to the system. For a system saturated with renewable energy, the CPRE process could provide an opportunity to more accurately align pricing with the actual value to the overall system, which could be less than the utility's effective avoided cost rates.

Alternatively, a CPRE process could help to diversity the utility's renewable fuel sources. In such a situation, the CPRE process may positively impact the

utility's ability to deploy intermittent resources by diversifying its generation mix, while also doing so in the most economic fashion.

Q. FROM A UTILITY'S PERSPECTIVE, SHOULD PRICE BE THE DETERMINATIVE FACTOR IN A CPRE PROCESS?

A. No, not necessarily. However, as I described above, it depends upon the need that the CPRE process is intended to address. As DESC Witness Koujak describes in greater detail, utilities will often place parameters around the CPRE process to ensure that the procured energy not only provides value to its customers, but also reliability to the overall system. The parameters can include reliability, locational benefits, financial strength, operating experience, and transmission availability, among others. This is critically important in any purchase of energy by a utility, whether via CPRE or otherwise. At the most fundamental level, a utility must be able to continually and reliably serve all customers, and this consideration should be front and center in any CPRE process.

Q. PLEASE SUMMARIZE DESC'S RECOMMENDATIONS IN THIS PROCEEDING.

A. A competitive procurement program may be challenging to manage and involves broad issues ranging from contract management, grid-interconnection and integration. Before committing to a CPRE process, there must be a substantial

understanding of the need and desired solution. This is a critical first step that must be clearly established due to the time commitment and potentially large financial costs involved. Only once the need and solution have been identified can you start down the path of designing the intricacies of the actual CPRE process. For example, the process must establish the comparative evaluation of the bids received in response to the CPRE. Potential solutions from the CPRE would also need to be assessed against opportunities outside of the CPRE process that may be lost due to the structure and requirements of the CPRE. With the above considerations in mind, Witness Koujack provides the following best practices:

1. CPREs should be driven by resource needs and plans identified in the Utility IRP process.
2. CPREs should be open to all technologies that meet operational, reliability and other identified resource requirements unless otherwise driven by specific policy goals.
3. CPREs should encourage wide participation to promote competition and maximize customer benefit.
4. CPREs should include appropriate oversight to ensure fairness and transparency.
5. CPRE evaluations should consider all system costs and benefits to ensure that projects are providing net benefits to utility customers.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.